

Application Number 10/669,392
Response to Office Action mailed October 26, 2007

REMARKS

This Amendment is responsive to the final Office Action dated October 26, 2007. Applicant has amended claims 20 and 40. Claims 20, 21, 23-30, 32-40, 42-45, 60-66, and 68-76 are pending.

Claim Rejection Under 35 U.S.C. § 112

In the final Office Action, claims 20, 21, 23-30, 32-40, 42-45, 60-66 and 68-76 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. In addition, claims 20, 21, 23-30, 32-40, 42-45, 60-66, and 68-76 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant respectfully traverses these rejections, particularly to the extent they are considered applicable to the amended claims.

As an initial matter, Applicant has amended claim 20 to clarify that the "collected information" results from collecting information for each of the stimulation settings. Similar amendments have also been made to claim 40. The amendments to claim 20 and 40 do not change the scope of claims 20 and 40, and do not add new matter.

Rejection under 35 U.S.C. § 112, first paragraph

Independent claim 20 recites a method comprising collecting information for each of a plurality of stimulation settings, where the information comprises rating information and a threshold amplitude value for a respective stimulation setting, and ordering the list according to at least one user-chosen criteria selected from the collected information. In support of the rejection of the claims under 35 U.S.C. § 112, first paragraph, the Office Action stated that the "original specification (e.g. pages 59-61) never discussed that the ordering of the list according to at least one user chosen criteria was 'selected from the collected information' but only that the list 'is sorted in rank order by physician chosen criteria' and not that it is selected from the collected information."¹ According to the Office Action, Applicant's disclosure does not set forth the chosen criteria, and, thus, the a user-chosen criteria recited in independent claim 20

¹ Office Action dated October 26, 2007 at page 2.

Application Number 10/669,392
Response to Office Action mailed October 26, 2007

could be a criteria such as how much power each setting uses to prevent battery drain and is not inherently selected from the collected information.²

Applicant respectfully disagrees with the Office Action and submits that the originally-filed disclosure discloses that a list of stimulation settings may be ordered according to a user-chosen criteria (e.g., a physician-chosen criteria) that is selected from information collected for the stimulation settings, e.g., rating information and threshold amplitude values, as recited in independent claim 20. Thus, Applicant's originally-filed disclosure fully supports the method recited in independent claim 20, as well as the methods recited in independent claims 29 and 40.

Applicant's originally-filed disclosure states that stimulation settings may be sorted and displayed in rank order by order of presentation, threshold amplitude value, scale threshold amplitude value on the range from perceptual to discomfort, patient rating of pain relief, and overlap or extraneous pixel proportions.³ Specifically, Applicant's disclosure states, "[i]n the course of the analysis, the system sorts and displays stimulation settings in rank order by: order of presentation; threshold amplitude value; . . . ; patient rating of pain relief at a chosen threshold; and overlap or extraneous pixel portions."⁴ Thus, Applicant's disclosure fully supports ordering a list of stimulation settings according to rating information (e.g., the patient rating of pain relief and overlap or extraneous pixel proportions) or a threshold amplitude value (hereinafter referred to as "information"), as recited in independent claim 20. Extraneous pixel portions may, for example, reflect the comparison between stimulation regions with pain regions, comparison of stimulation regions with target areas of interest, comparison of pain map to pain map, or comparison between other types of collected drawings.⁵

Applicant's disclosure also supports a method comprising ordering a list of stimulation settings according to a user-chosen criteria selected from information collected for stimulation settings. For example, at page 61, lines 23-26, Applicant's disclosure states that "[t]he list of best or optimal settings is produced which is sorted in rank order by physician chosen criteria." This "rank order" was previously referred to in the discussion of different types of information that may be collected. That is, as established above, the system may sort and display stimulation

² *Id.*

³ Applicant's originally-filed disclosure at p. 59, l. 18 – p. 60, l. 1.

⁴ *Id.*

⁵ *Id.* at p. 59, ll. 2-17.

Application Number 10/669,392
Response to Office Action mailed October 26, 2007

settings in rank order by order of presentation, threshold amplitude value, scale threshold amplitude value on the range from perceptual to discomfort, patient rating of pain relief, and overlap or extraneous pixel proportions.⁶ Thus, in order for this same "rank order" to be established based on physician-chosen criteria, the physician must choose a criteria from among the different types of information referred to at page 59, line 18 to page 60, line 1.

While Applicant's disclosure does not explicitly refer to the different types of information as "criteria," one skilled in the art would understand that reference to the physician-chosen "criteria" (referred to at page 61, lines 23-26) refers to at least one type of information (e.g., patient rating of pain relief), at least in part because of the consistent use of "rank order." The term "criteria" has a well-known meaning of being a standard on which a judgment or decision may be based.⁷ Thus, according to Applicant's disclosure at page 61, lines 23-26, a physician may choose a standard by which to produce a rank order.⁸ This "rank order" was previously described as being a list of stimulation settings sorted by various types of information, such as patient rating of pain relief or threshold amplitude value. Thus, the physician chosen "criteria" discussed at page 61, lines 23-26 clearly refers back to the types of information previously described, e.g., rating information and threshold amplitude values.

"Rank order" is described consistently throughout Applicant's disclosure as a sorted list of stimulation settings.⁹ A list of best or optimal stimulation settings may be produced, where the list of best or optimal stimulation settings may be sorted in rank order by physician chosen criteria.¹⁰ Thus, in some cases, a "rank order" of stimulation settings may be achieved based on physician chosen criteria. Because Applicant's disclosure describes that the rank order may be based on different types of information, such as rating information and threshold amplitude values,¹¹ it is clear that the same rank order that is produced based on physician chosen criteria may also be ordered by the different types of information, such as rating information and rating information. Thus, it necessarily flows that the physician may choose a criteria from among the

⁶ *Id.* at p. 59, l. 18 – p. 60, l. 1.

⁷ <http://www.m-w.com/dictionary/criteria>

⁸ Applicant's originally-filed disclosure at p. 61, ll. 23-26.

⁹ *Id.* at p. 61, ll. 23-26 and p. 59, l. 18 – p. 60, l. 1.

¹⁰ *Id.* at p. 61, ll. 23-26.

¹¹ *Id.* at p. 59, l. 18 – p. 60, l. 1.

Application Number 10/669,392
Response to Office Action mailed October 26, 2007

list of criteria listed at page 59, line 18 to page 60, line 1 in order to produce the list of best or optimal settings referred to at page 61, lines 23-26.

Applicant's disclosure does not refer to ordering a list of stimulation settings according to how much power each setting uses, as suggested by the Office Action. Rather, one skilled in the art would understand that reference to the "rank order by physician chosen criteria" referred to as page 61, lines 23-26 refers to the same "rank order" discussed at page 59, lines 18-19, which is based on different types of information, such as rating information and threshold amplitude values. Accordingly, in view of the specification, one skilled in the art would understand that claim 20, which recites ordering a list of stimulation settings according to at least one user-chosen criteria selected from collected information comprising rating information and a threshold amplitude value is fully supported by Applicant's originally-filed specification.

For at least the reasons discussed above with respect to independent claim 20, independent claims 29 and 40 are fully supported by Applicant's originally-filed disclosure. Claims 21, 23-28, 30, 32-39, 42-45, and 60-66, and 68-76 depend from one of independent claims 20, 29, and 40, and, for similar reasons, meet the limitations of 35 U.S.C. § 112, first paragraph.

Rejection under 35 U.S.C. § 112, second paragraph

In the final Office Action, claims 20, 21, 23-30, 32-40, 42-45, 60-66, and 68-76 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Office Action stated that "[i]n claims 20, 29, and 40, the claims are incomplete since in order for the criteria to be 'selected from the collected information' the claims should first positively recite that a selection is made."¹² Applicant has amended independent claims 20 and 40 for purposes of clarification. Applicant's disclosure describes a system that sorts a list of stimulation settings in rank order by physician-chosen criteria.¹³ Thus, one skilled in the art would understand that the system must receive input from a user selecting a criteria.

¹² Office Action dated October 26, 2007 at p. 3.

¹³ Applicant's originally-filed disclosure at p. 61, ll. 23-24.

Application Number 10/669,392
Response to Office Action mailed October 26, 2007

In addition, Applicant notes that claim 29 as previously presented recited a device that is adapted to receive input from a user choosing at least one criteria selected from the collected information. Accordingly, claim 29 as previously presented positively recited that a user selects a criteria from the collected information, and the scope of previously presented claim 29 is clear.

Applicant submits that claims 20 and 40, as amended, and claim 29 as previously presented particularly point out and distinctly claim the subject matter, as required by 35 U.S.C. § 112, second paragraph. Applicant respectfully requests withdrawal of the rejection of claims 20, 21, 23-30, 32-40, 42-45, 60-66, and 68-76 under 35 U.S.C. § 112, second paragraph.

CONCLUSION

All claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number 50-1778. The Examiner is invited to telephone the below-signed attorney to discuss this application.

Date:

By:

December 21, 2007
SHUMAKER & SIEFFERT, P.A.
1625 Radio Drive, Suite 300
Woodbury, Minnesota 55125
Telephone: 651.735.1100
Facsimile: 651.735.1102

Jessica H. Kwak
Name: Jessica H. Kwak
Reg. No.: 58,975